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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,434

02/12/2004

Rainer Paetzel

LMPY-20010

4784

28584

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07/13/2006

STALLMAN & POLLOCK LLP  
353 SACRAMENTO STREET  
SUITE 2200  
SAN FRANCISCO, CA 94111

EXAMINER

LANE, JEFFREY D

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/777,434

Applicant(s)

PAETZEL, RAINER

Examiner

Jeffrey D. Lane

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Partio et al. (US 6021150).

As for claim 23, Partio discloses, A laser comprising: a gas discharge chamber (fig. 6) having at least two electrodes 315 for energizing a laser gas (abstract) in the chamber to generate optical pulses according to a pulse pattern; a fluid heat exchanger 320 located in the discharge chamber; an external fluid source (See Column 8 lines 51-56) providing fluid to the heat exchanger; a flow control valve for controlling the amount of fluid provided to the heat exchanger (See Column 8 lines 51-56); a first temperature sensor 330 for measuring the temperature of the laser gas within the discharge chamber 120 and generating first temperature signals; a second temperature sensor 600 for measuring the temperature of the discharge chamber body 120 and generating

second temperature signals; and a temperature regulation controller for controlling the flow control valve in response to the first and second temperature signals (See Column 8 lines 51-56).

As for claim 24, Partio discloses in fig 9, a third temperature sensor 930 for measuring the temperature of the fluid from the source and generating third temperature signals, said temperature regulation controller for controlling the flow control valve in response to the first, second and third temperature signals (See column 11 lines 29-36).

As for claim 25, Partio discloses, a heater element (See column 12 lines 18-19) in contact with the laser tube and controlled by said temperature regulation controller based on said first and second temperature signals

As for claim 26, Partio discloses, A method for stabilizing gas temperature in a pulsed gas discharge laser, said laser having a discharge chamber (fig 6), said method comprising the steps of: directing a flow of cooling fluid through tubing 320 disposed at least partially within the discharge chamber 120 of the laser; measuring the temperature of the gas 330 in the discharge chamber and generating first temperature signals; and measuring the temperature of the discharge chamber body 600 and generating second temperature signals; and adjusting the amount of cooling fluid flowing through the tubing based the first and second temperature signals(See Column 8 lines 51-56).

As for claim 27, the step of measuring the temperature of the cooling fluid 930 and generating third temperature signals and adjusting the amount of cooling fluid

flowing through the tubing (See Column 11 lines 29-36) based on the first, second and third temperature signals.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Partio et al. (US 6,021,150) in view Meier (US 5,617,440).

As for claim 28, Partio discloses all that pertains to claim 26 above. However, Partio does not disclose the heating element surrounding the laser tube. Meier discloses, "The metallic housing serves as an oven for setting the temperature of the laser tube. The heating is intended to avoid stressing the laser tube, in order not to vary the inclination of the mirrors with respect to one another. " (Column 1 lines 17-21). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to make the heating element surround the laser tube to avoid stressing the tube.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Partio et al. (US 6,021,150) in view of Ujzdowski et al. (US 6,034,978).

As for claim 29 Partio discloses all that pertains to claim 26. However Partio does not disclose a system controller generating a signal based on energy dissipation. Ujzdowski discloses, "controller receives a signal from the stepper or scanner 74 in advance of idle periods, such as at the start of a series of bursts. Controller 70 is programmed to turn heater 72 on and off on a cycle which is calculated to minimize the gas temperature fluctuation due to the extended several-second idle period." (Column 10 lines 25-30) Therefore it would have been obvious at the time of the invention to use a system controller that generates a dissipation signal to minimize the gas temperature fluctuations.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Response to Arguments***

7. Applicant's arguments filed 5/19/06 have been fully considered but they are not persuasive.

As to the argument that Partio does not disclose using both the sensors at the same time, the limitation is not in the claims and therefore is moot. Note: the instant application does not explicitly teach using more than one sensor "at the same time".


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Lane whose telephone number is (571) 272-1676. The examiner can normally be reached on Monday thru Friday 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeffrey D Lane  
Examiner  
Art Unit 2828

JDL

  
MINSUN OH HARVEY  
PRIMARY EXAMINER